
USACE / CESAJ

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS

CESAJ 01 78 02 (Apr 2006)

JACKSONVILLE DISTRICT LOCAL MASTER GUIDE SPECIFICATION

SECTION 01 78 02

CLOSEOUT SUBMITTALS 11/08

NOTE: This guide specification covers the requirements for closeout submittals including: revised project documents, warranty management, testing, adjusting and balancing, O & M manuals, and final cleaning.

Comments and suggestions are welcome. Using E-mail for feedback is encouraged. Comments should be directed to:

Engineering Division, Design Branch, Specifications Section.

ALL COMMENTS RECEIVED WILL BE DISSEMINATED TO THE PROPER OFFICE FOR RESPONSE.

PART 1 GENERAL

NOTE TO SPEC WRITER: Coordinate with the designer/customer regarding special warranty requirements and options.

1.1 REFERENCES

NOTE: Delete this paragraph if Paragraph 1.3 PROJECT RECORD DOCUMENTS is deleted (dredging projects at the Project Engineer's discretion).

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

U.S. DEPARTMENT OF DEFENSE (DOD)

ERDC/ITL TR-01-6

(2006) A/E/C CADD Standard, Release 3.0
Obtain from the following web site:

<https://tsc.wes.army.mil/products/standards/aec/aecstdweb.asp>

U.S. ARMY CORPS OF ENGINEERS (USACE)

CESAJR 1110-4-2

(2006) CADD Standards Guide, Jacksonville District, Change 1; Obtain from the following web site:
http://www.saj.usace.army.mil/Divisions/Engineering/CADD_MmgtSup.htm

1.2 SUBMITTALS

 NOTE: Delete this paragraph if no submittals are required. Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item should be required.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

As-Builts; G|RO

 NOTE: Delete this paragraph if Paragraph 1.3 PROJECT RECORD DOCUMENTS is deleted (dredging projects at the Project Engineer's discretion).

Submit as indicated in the subparagraph "Preparation of As-Builts" of paragraph PROJECT RECORD DOCUMENTS below. All drawing revisions and as-builts will be checked for compliance with ERDC/ITL TR-01-6 and CESAJR 1110-4-2.

SD-03 Product Data

As-Built Record of Equipment and Materials; [G|]

 NOTE: Delete if not applicable to project. FILL IN BLANK WITH APPROPRIATE APPROVING OFFICE AND DELETE BRACKETS. ALSO, DELETE SEMICOLON AND REFERENCE TO "G" IF TO BE USED FOR "FIO" ONLY. WE NO LONGER SHOW "FIO".

[Two] [_____] copies of the record listing the as-built materials and equipment as approved during shop drawing submittal, review and approval process, incorporated into the construction of the project.

Warranty Management Plan; [G|]

 NOTE: For use with projects requiring extended warranties. Delete if not applicable to project. FILL IN BLANK WITH APPROPRIATE APPROVING OFFICE AND DELETE BRACKETS. ALSO, DELETE SEMICOLON AND REFERENCE TO "G" IF TO BE USED FOR "FIO" ONLY. WE NO LONGER SHOW "FIO".

[One set] [[_____] sets] of the warranty management plan containing information relevant to the warranty of materials and equipment incorporated into the construction project, including the starting date of warranty of construction. The Contractor shall furnish with each warranty the name, address, and telephone number of each of the guarantor's representatives nearest to the project location.

Warranty Tags; [G|]

 NOTE: For use with projects requiring extended warranties. Delete if not applicable to project. FILL IN BLANK WITH APPROPRIATE APPROVING OFFICE AND DELETE BRACKETS. ALSO, DELETE SEMICOLON AND REFERENCE TO "G" IF TO BE USED FOR "FIO" ONLY. WE NO LONGER SHOW "FIO".

[Two] [_____] record copies of the warranty tags showing the layout and design.

Final Cleaning; [G|]

 NOTE: Delete if not applicable to project. FILL IN BLANK WITH APPROPRIATE APPROVING OFFICE AND DELETE BRACKETS. ALSO, DELETE SEMICOLON AND REFERENCE TO "G" IF TO BE USED FOR "FIO" ONLY. WE NO LONGER SHOW "FIO".

[Two] [_____] copies of the listing of completed final clean-up items.

1.3 PROJECT RECORD DOCUMENTS

 NOTE: For dredging projects, delete this paragraph if requested by the Project Engineer.

1.3.1 Definitions

1.3.1.1 Design Files

Design files are the latest version electronic CADD files.

1.3.1.2 Working As-Built Drawings

Working as-built drawings are full-sized contract drawings (hard copy) marked up in red to indicate as-built conditions.

1.3.1.3 Completed Working As-Built Drawings

Completed working as-built drawings are the final working as-built drawings (hard copy) for a completed feature certified by the Contractor.

1.3.1.4 As-Built Files

As-built files are corrected design files (CADD) showing the as-constructed condition identical to the completed working as-built drawings. As-built files are produced by making changes to the design files using CADD.

1.3.1.5 As-Builts

As-builts are the complete set, as indicated below, including as-built files (CADD) and completed working as-built drawings in hard copy and electronic format.

1.3.1.6 As-Built Shop Drawings

As-built shop drawings are detailed shop drawings of components incorporated into the completed work indicating as-built conditions.

1.3.2 Preparation of As-Builts

NOTE: The USACE policy on as-built (RECORD) drawings is as follows:

a. **Method of Preparation for Military Projects.**
The construction Contractor will prepare the final as-built drawings in CADD format.

b. **Method of Preparation for Civil Works Projects.** The preferred method of preparing the final as-built drawings is by the construction Contractor. The management plan for the project must justify the preparation of the final as-built drawings by any other method, such as by in-house personnel. Two such exceptions are "emergency construction" and operations work performed with hired labor. Revise the following specification paragraphs if as-builts are not to be done by the Contractor.

c. **Customer Coordination.** The method of producing the as-built drawings and their format will be discussed with the customer at the beginning of a project, reflected in the Memorandum of Understanding with the customer (if applicable) and the management plan for the project, and confirmed with the customer before issuing the construction solicitation.

This paragraph covers obtaining completed working as-built drawings and as-built files (CADD), as a requirement of the contract. These as-builts are part of the permanent records of this project and will be retained by the Contracting Officer after approval by the Government. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

1.3.2.1 Government-Furnished Materials

One set of electronic CADD files (design files) in the specified software and format revised to reflect all bid amendments will be provided by the Government at the Preconstruction Conference for projects requiring CADD file as-built drawings (as-built files).

1.3.2.2 Working As-Built and Completed Working As-Built Drawings

NOTE: Select appropriate reference.

The Contractor shall revise [2] [_____] sets of paper drawings by red-line process to show the as-built conditions during the prosecution of the project. These working as-built drawings shall be kept current on a weekly basis and at least one set shall be available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes. All mechanical and electrical changes due to field Request for Information (RFI) process, equipment shop drawings reflecting modified data due to submittal and approval process, and contract field and design modifications shall be incorporated in the working as-built drawings. Completed working as-built drawings shall be prepared after the completion of each definable feature of work as listed in the Contractor Quality Control Plan (Foundations, Utilities, Structural Steel, etc., as appropriate for the project). The working as-built drawings and completed working as-built drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. The working as-built drawings and completed working as-built drawings shall show, but shall not be limited to, the following information:

a. The actual location, kinds and sizes of all subsurface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, these drawings shall show, by offset dimensions to two permanently fixed surface features, the end of each run including each change in direction. Valves, splice boxes and similar appurtenances shall be located by dimensioning along the utility run from a reference point. The average depth below the surface of each run shall also be recorded.

b. The location and dimensions of any changes within the building structure.

c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

d. Changes in details of design or additional information obtained from shop drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

f. Changes or modifications which result from the final inspection.

g. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the completed working as-built drawings.

h. Systems designed or enhanced by the Contractor; such as, but not limited to, HVAC controls, fire alarm, fire sprinkler, irrigation systems, pumping equipment, hydraulic operating system, fuel system, electrical controls, one-line diagram telemetry and SCADA system, conduit and piping layout, etc.

i. Modifications (change order price shall include the Contractor's cost to change working as-built drawings and completed working as-built drawings to reflect modifications) and compliance with the following procedures.

(1) Directions in the modification for posting descriptive changes shall be followed.

(2) A Modification Circle shall be placed at the location of each deletion.

(3) For new details or sections which are added to a drawing, a Modification Circle shall be placed by the detail or section title.

(4) For minor changes, a Modification Circle shall be placed by the area changed on the drawing (each location).

(5) For major changes to a drawing, a Modification Circle shall be placed by the title of the affected plan, section, or detail at each location.

(6) For changes to schedules or drawings, a Modification Circle shall be placed either by the schedule heading or by the change in the schedule.

(7) The Modification Circle size shall be 12.7 mm 1/2 inch diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

NOTE: Delete the paragraph below if as-built borrow area survey is not required.

[j. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, the Contractor shall furnish a contour map of the final borrow

pit/spoil area elevations.]

1.3.2.3 Drawing Preparation

The as-built files (CADD) shall be modified as may be necessary to correctly show the features of the project as it has been constructed by bringing the contract set into agreement with approved completed working as-built drawings, and adding such additional drawings as may be necessary. The completed working as-built drawings and as-built files shall be neat, legible and accurate.

1.3.2.4 Computer Aided Design and Drafting (CADD) Drawings

NOTE: Edit this paragraph to specify CADD drawings
compatible with the customer's CADD system,
providing the version where applicable.

Only personnel proficient in the preparation of CADD drawings shall be employed to modify the design files and prepare additional new drawings files when preparing as-built files.

a. All drawing revisions shall be performed and conform to
 ERDC/ITL TR-01-6 and CESAJR 1110-4-2.

b. CADD drawings shall utilize Computer Aided Design named levels to add text, redlines and revision areas to the CADD drawings. The first character of the levels shall start with the discipline designator of the sheet type as listed on Table 2-1 of the AEC CADD Standard. The next set of characters is ANNO to represent the annotation field. The final characters represent the type of information TEXT (text), REDL (redlines), and REVS (revisions). An example for an architectural discipline sheet level is A-ANNO-TEXT, A-ANNO-REDL, and A-ANNO-REVS.

c. Additions and corrections to the as-built files shall be equal in quality and detail to that of the original design files. Line colors, line weights, lettering, layering conventions, and symbols shall be the same as the original line colors, line weights, lettering, layering conventions, and symbols. If additional drawings are required in the as-built files, they shall be prepared using the specified electronic file format applying the same graphic standards specified for original drawings. The title block and drawing border to be used for any new drawings in the as-built files shall be identical to that used on the design file drawings. Additions and corrections to the as-built files shall be accomplished by incorporating the same CADD program/system used to prepare the design files. The Contractor will be furnished Microstation design files. The electronic files will be supplied on compact disc, read-only memory (CD-ROM). The Contractor shall use the electronic design files provided by the Government at the Preconstruction Conference to prepare changes and additions to the electronic as-built files. New drawings added to the original set of drawings shall be prepared in the same CADD format used to create the design files provided by the Government. The Contractor shall not translate or change the Government-furnished files from original formats. As-built record changes shall be recorded using the manufacturer's program in which the design files were created. The Contractor shall be responsible for providing all programs and hardware necessary to prepare as-built files. The Contracting Officer will

review as-built files for accuracy and the Contractor shall make required corrections, changes, additions, and deletions.

d. The design files shall be renamed in a manner related to the contract number (i.e., 98-C-10.DGN) as instructed in the Preconstruction Conference. Marked-up changes shall be made only to those renamed files. The renamed files corrected to reflect the "as-built" condition are hereafter referred to as "as built files".

NOTE: Use the paragraph below at the descretion of the project team based on size of the contract and ability of prospective contractors to subcontract or perform CADD work.

[e. As an alternative, the Government may exercise the option of preparing the as-built files (CADD) with their own resources, and reduce the contract amount to cover the cost of this work.]

1.3.2.5 Completion of As-Built

The completed working as-built drawings (hard copy) and as-built files (CADD) shall be completed as follows:

a. When final revisions have been completed, the cover sheet drawing shall show the wording "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in letters at least 5 mm3/16 inch high. All other contract drawings shall be marked either "AS-BUILT" drawing denoting no revisions on the sheet or "REVISED AS-BUILT" denoting one or more revisions. Original contract drawings shall be dated in the revision block. The Contractor shall sign the cover sheet of the marked-up drawings in the following manner: "I CERTIFY THAT THESE CORRECTED DRAWINGS INDICATE CONSTRUCTION AS ACTUALLY PERFORMED AND ARE AN ACCURATE REPRESENTATION OF THE SPECIFIED WORK. THESE CORRECTED DRAWINGS ARE APPROVED FOR PREPARATION OF AS-BUILT CONSTRUCTION DRAWINGS."

NOTE for next paragraph: In the first set of bracketed numbers, the first two choices are for contracts less than five million dollars, the third and fourth choices are for contracts worth at least five million dollars, and the blank brackets are for a descretionary choice. In the second and third set of bracketed numbers, the first choice is for contracts less than five million dollars, the second choice is for contracts worth at least five million dollars, and the blank brackets are for a descretionary choice.

b. Within [10] [30] [20] [60] [____] days after Government approval of all of the working as-built drawings for a phase of work, the Contractor shall prepare the as-built files (CADD) for that phase of work and submit two sets of prints of these drawings for Government review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within [7] [10] [____] days, the Contractor shall revise the as-built files

accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within [10] [20] [____] days of substantial completion of all phases of work, the Contractor shall submit the final as-builts for the entire project. The submittal shall consist of 4 sets of as-built files in Microstation format on compact disc, read-only memory (CD-ROM); 2 sets of the approved completed working as-built drawings; and, 2 CDs containing .pdf files electronically generated or scanned from the approved set of completed working as-built drawings. They shall be complete in all details and identical in form and function to the design files supplied by the Government. The .pdf files produced from the approved completed working as-built drawings shall be of high resolution and quality, and easily readable. Any transactions or adjustments necessary to accomplish this is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CADD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit as-builts as specified shall be cause for withholding any payment due the Contractor as retainage under the clause PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS of Section 00700 CONTRACT CLAUSES in Volume 1. Approval and acceptance of as-builts shall be accomplished before final payment is made to the Contractor.

1.3.3 As-Built Record of Equipment and Materials

NOTE: This paragraph is intended to provide data on equipment and materials incorporated in the construction of the project that cannot readily be determined after completion of construction. The data is expected to be of value for future maintenance, alteration, and repair work. The designer should predetermine the items on which data is required and list them in the DESCRIPTION column of the following form. A typical list of items would include such things as: roofing, insulation, and special wall coverings.

NOTE TO SPEC WRITER: DELETE IF NOT APPLICABLE.

The Contractor shall furnish [one copy] [[____]copies] of preliminary record of equipment and materials used on the project [15] [____] days prior to final inspection. This preliminary submittal will be reviewed and returned [2] [____] days after final inspection with Government comments. [Two] [____] sets of final record of equipment and materials shall be submitted [10] [____] days after final inspection. The designations shall be keyed to the related area depicted on the contract drawings. The record shall list the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA

Description	Specification Section	Manufacturer and Catalog, Model, and Serial Number	Composition and Size	Where Used
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1.3.4 As-Built Shop Drawings

NOTE: DELETE IF NOT APPLICABLE.

The Contractor shall furnish final approved as-built shop drawings [30] [_____] days after transfer of the completed facility.

1.3.5 Construction Contract Specifications

NOTE: DELETE IF NOT APPLICABLE.

The Contractor shall furnish final as-built construction contract specifications, including modifications thereto, [30] [_____] days after transfer of the completed facility.

1.3.6 Real Property Equipment

NOTE: DELETE IF NOT APPLICABLE.

The Contractor shall furnish a list of installed equipment furnished under this contract. The list shall include all information usually listed on manufacturer's name plate. The "EQUIPMENT-IN-PLACE LIST" shall include, as applicable, the following for each piece of equipment installed: description of item, location (by room number), model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty. A draft list shall be furnished at time of transfer. The final list shall be furnished [30] [_____] days after transfer of the completed facility.

1.4 WARRANTY MANAGEMENT

NOTE: A warranty package based on a cost/benefit determination will be established with the customer at the beginning of a project.

NOTE TO SPEC WRITER: FOR PROJECTS WITH EXTENDED WARRANTIES; DELETE PARAGRAPH IN ITS ENTIRETY IF NOT APPLICABLE. HOWEVER, IF PARAGRAPH IS USED, BE SURE TO CHECK WARRANTY OF CONSTRUCTION CLAUSE ON CT-C CHECKLIST WHEN FRONTS PACKAGE IS REQUESTED. EDIT PARAGRAPH ACCORDINGLY TO MEET SITE SPECIFIC CONTRACT NEEDS.

1.4.1 Warranty Management Plan

The Contractor shall develop a Warranty Management Plan which shall contain information relevant to the Clause WARRANTY OF CONSTRUCTION of Section 00700 CONTRACT CLAUSES in Volume 1. At least 30 days before the planned pre-warranty conference, the Contractor shall submit the Warranty Management Plan for Government approval. The Warranty Management Plan

shall include all required actions and documents to assure that the Government receives all warranties to which it is entitled. The Plan shall be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below shall include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase shall be submitted to the Contracting Officer for approval prior to each monthly pay estimate. Approved information shall be assembled in a binder and shall be turned over to the Government upon acceptance of the work. The construction warranty period shall begin on the date of project acceptance and shall continue for the full product warranty period. A joint 4 month and 9 month warranty inspection shall be conducted, measured from time of acceptance, by the Contractor, Contracting Officer and the Customer Representative. Information contained in the Warranty Management Plan shall include, but shall not be limited to, the following:

a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.

b. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.

c. A list for each warranted equipment, item, feature of construction or system indicating:

1. Name of item.
2. Model and serial numbers.
3. Location where installed.
4. Name and phone numbers of manufacturers or suppliers.
5. Names, addresses and telephone numbers of sources of spare parts.
6. Warranties and terms of warranty. This shall include one-year overall warranty of construction. Items which have extended warranties shall be indicated with separate warranty expiration dates.
7. Cross-reference to warranty certificates as applicable.
8. Starting point and duration of warranty period.
9. Summary of maintenance procedures required to continue the warranty in force.
10. Cross-reference to specific pertinent Operation and Maintenance Manuals.
11. Organization, names and phone numbers of persons to call for warranty service.
12. Typical response time and repair time expected for various warranted equipment.

d. The Contractor's plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

e. Procedure and status of tagging of all equipment covered by extended warranties.

f. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.4.2 Performance Bond

The Contractor's Performance Bond [shall remain effective throughout the construction period] [_____].

a. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.

b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.

c. Following oral or written notification of required construction warranty repair work, the Contractor shall respond in a timely manner. Written verification will follow oral instructions. Failure of the Contractor to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.4.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. Communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty shall be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, the Contractor shall furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact will be located within the local service area of the warranted construction, shall be continuously available, and shall be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

1.4.4 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, the Contractor shall respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of priorities listed below. The Contractor shall submit a report on any warranty item that has been repaired during the warranty period. The report shall include the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the time frames specified, the Government will perform the work and back charge the construction warranty payment item established.

a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.

b. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.

c. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.

d. The "Construction Warranty Service Priority List" is as follows:

**NOTE: THE FOLLOWING IS A TYPICAL EXAMPLE OF
WARRANTY ITEMS THAT MAY BE NEEDED; EDIT PARAGRAPH
ACCORDINGLY TO BE SITE SPECIFIC FOR CONTRACT.**

Code 1-Air Conditioning Systems

- (1) Recreational support.
- (2) Air conditioning leak in part of building, if causing damage.
- (3) Air conditioning system not cooling properly.

Code 1-Doors

- (1) Overhead doors not operational, causing a security, fire, or safety problem.
- (2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors

- (1) Overhead doors not operational.
- (2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical

- (1) Power failure (entire area or any building operational after 1600 hours).
- (2) Security lights.
- (3) Smoke detectors.

Code 2-Electrical

- (1) Power failure (no power to a room or part of building).
- (2) Receptacle and lights (in a room or part of building).

Code 3-Electrical

Street lights.

Code 1-Gas

- (1) Leaks and breaks.
- (2) No gas to family housing unit or cantonment area.

Code 1-Heat

- (1) Area power failure affecting heat.
- (2) Heater in unit not working.

Code 2-Kitchen Equipment

- (1) Dishwasher not operating properly.
- (2) All other equipment hampering preparation of a meal.

Code 1-Plumbing

- (1) Hot water heater failure.
- (2) Leaking water supply pipes.

Code 2-Plumbing

- (1) Flush valves not operating properly.
- (2) Fixture drain, supply line to commode, or any water pipe leaking.
- (3) Commode leaking at base.

Code 3-Plumbing

Leaky faucets.

Code 3-Interior

- (1) Floors damaged.
- (2) Paint chipping or peeling.
- (3) Casework.

Code 1-Roof Leaks

Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks

Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)

No water to facility.

Code 2-Water (Hot)

No hot water in portion of building listed.

Code 3-All other work not listed above.

1.4.5 Warranty Tags

At the time of installation, each warranted item shall be tagged with a durable, oil and water resistant tag approved by the Contracting Officer. Each tag shall be attached with a copper wire and shall be sprayed with a silicone waterproof coating. The date of acceptance and the QC signature shall remain blank until project is accepted for beneficial occupancy. The tag shall show the following information.

- a. Type of product/material_____.
- b. Model number_____.
- c. Serial number_____.
- d. Contract number_____.
- e. Warranty period_____from_____to_____.
- f. Inspector's signature_____.

- g. Construction Contractor_____.
- Address_____.
- Telephone number_____.
- h. Warranty contact_____.
- Address_____.
- Telephone number_____.
- i. Warranty response time priority code_____.
- j. WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.

1.5 MECHANICAL TESTING, ADJUSTING, BALANCING, AND COMMISSIONING

NOTE: The designer will edit this paragraph as required for projects that include mechanical systems. DELETE IF NOT APPLICABLE.

Prior to final inspection and transfer of the completed facility; all reports, statements, certificates, and completed checklists for testing, adjusting, balancing, and commissioning of mechanical systems shall be submitted to and approved by the Contracting Officer as specified in applicable technical specification sections.

1.6 OPERATION AND MAINTENANCE MANUALS

NOTE: DELETE IF NOT APPLICABLE.

Operation manuals and maintenance manuals shall be submitted as specified. Operation manuals and maintenance manuals provided in a common volume shall be clearly differentiated and shall be separately indexed. Refer to Section 01 78 23 OPERATION AND MAINTENANCE DATA.

1.7 FINAL CLEANING

NOTE: EDIT ACCORDINGLY TO BE SITE SPECIFIC.

The premises shall be left broom clean. Stains, foreign substances, and temporary labels shall be removed from surfaces. Carpet and soft surfaces shall be vacuumed. Equipment and fixtures shall be cleaned to a sanitary condition. Filters of operating equipment shall be [cleaned] [replaced]. Debris shall be removed from roofs, drainage systems, gutters, and downspouts. Paved areas shall be swept and landscaped areas shall be raked clean. The site shall have waste, surplus materials, and rubbish removed. The project area shall have temporary structures, barricades, project signs, [_____] and construction facilities removed. A list of completed clean-up items shall be submitted on the day of [final inspection] [_____].

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --